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ABSTRACT

A simplified account of an extensive library automation and networking project that the Andrew W. Mellon Foundation initiated and funded in the Czech and Slovak republics is provided in this paper. The proposal to establish "The Czech and Slovak Library Information Network" (CASLIN) commenced in January 1993. Storage, document preservation, retrospective conversion, and connectivity have all undergone substantial changes over the past few years. However, the CASLIN partnership was weakened and library management left dysfunctional due to a parallel, semi-clandestine, political plot. The fact that all the original CASLIN libraries come under the administrative oversight of the Ministry of Culture explains the persistence of territorial behavior; the dramatic cuts in the ministries' overall budgets are passed down to the beneficiaries who find themselves competing for limited goods. The publishing world was strictly regulated under the previous regime. At present, due to severe cuts in budget, many libraries cannot begin to fulfill even the most spartan acquisitions policy; for the same reason, publishers do not consider libraries as important parts of their market. The introduction of information technologies into the state scientific and national libraries, in particular the CASLIN group, was the single most visible and disruptive change. Unless there is a change in government policy towards a more consistent support, both financial and legislative, for education and research, the situation will continue to take on many backhanded twists and turns. (AEF)

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Session #7 Multi-Institutional Cooperation

The Cross Currents of Technology Transfer: The Czech and Slovak Library Information Network.

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I. Introduction

One would have no great difficulty in estimating the demand function, i.e., the relationship between the price and the quantity that can be sold at that price for, say, tomatoes. But one would have considerable problems in making sales predictions at

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> various hypothetical alternative prices for a new product that looks like a blue tomato and tastes like a peach. (Quandt 1995:20)

This vivid image of an odd looking vegetable that tastes like a fruit is meant to highlight the difficulty of estimating the demand side in the overall cost picture of producing and distributing new products, such as electronic publications. Compared to the 'traditional' printed material, electronic products *are* new, from their internal architecture to the mechanisms of production, distribution, and access that stem from it. As the author of the above quote points out: "Econometric approaches are well developed for estimating the demand for given products, but face greater difficulties in estimating the demand for products with as yet untested combinations of characteristics" (ibid.). After all, the world of readers is not a homogeneous social group, a market with a simple set of specific needs. Yet, we assume that a segment of this market--the scholarly community--takes easily and *more or less* quickly to supplementing their long established habits (of associating the printed text with a paper object) with different habits, experienced as equally convenient, of searching for and reading electronic texts. While this may be so, it should be emphasized *at this point* that it is precisely in the expression "more or less" that the opportunity lies--for those of us interested in transitions--to see what is involved in this change of habit and why it is not just a "matter of time." As anyone who has tried to explain the possibilities of electronic text delivery to an educated friend will attest, the idea is viewed with anxiety, it is taken to mean the end of the book. The Minister of Culture of the Czech Republic, a well known author and dissident, looked at me with surprise as I tried to explain the need for library automation (and therefore for his ministerial support); he held both hands clasped together as if in prayer and then opened them up like a book close to his face. He took a deep breath, exhaled and explained how much the scent of books meant to him. A rather daring leap of the imagination--from on-line cataloguing and microfilm preservation to the demise of his personal library--but not an uncommon one, even among those who should know better. What was I to say to a professor of aesthetics at Charles University in Prague who demanded to know the truth about "that library project you are involved in" at the National Library in Prague? She had gone to pick up a book ordered through ILL and was advised by the person attending the circulation desk that she had better photocopy it because, "once they install the computers we will stop lending the books." It is not just the community of scholars, then, but librarians and politicians who must change their attitudes and habits. The problem is further compounded, and the blue tomato cum peach extended, if we consider that in the case of Eastern Europe this new product is being introduced into a setting where the very notion of a market is itself unsettled. The question of demand is quite different in a society that had been dominated by a political economy of command.

Needless to say, these humorous examples are neither particular to Eastern Europe nor to information technology (fantastic expectations have accompanied the introduction of many innovations that have changed the way we live). They merely highlight the period of transition when a blue tomato tastes like a peach. The important point about these perceptions is that, like all perceptions, they reflect a world of expectations "already in place" (what anthropologists would call culture) and they inform actions that, intended to change that world also end up reinforcing it. It is no different with information technology and its relation to scholarly research.

In the pages that follow I will give a simplified account of an extensive library automation and networking project that the Andrew W. Mellon Foundation initiated and funded abroad, in the Czech and Slovak republics. My aim is critical rather than comprehensive. By telling the reader about some of the obstacles that have been confronted along the way, I hope to draw attention

to the kinds of issues that need to be kept in mind when we think of establishing library consortia--the seemingly natural setting for the new technologies--in other countries. The story told here is but part of the whole picture. But it is an essential part. In so far as it is about "transition," it is also about the kinds of things that take place before other things can follow.

II. *The CASLIN projects*

The Mellon-funded proposal to establish *The Czech and Slovak Library Information Network* (CASLIN) commenced in January 1993. In its original stage it involved four libraries in what has now become two countries: the National Library of the Czech Republic (in Prague) and the Moravian Regional Library (Brno) the Slovak National Library (Martin) and the University Library of Bratislava. These four libraries had signed an agreement (a "Letter of Intent") that they would cooperate in all matters that pertained to fully automating their technical services and, eventually, in developing and maintaining a single on-line Union Catalogue. They also committed themselves to introducing and upholding formats and rules that would enable a "seamless" integration into the growing international library community. For example, compliance with the UNIMARC format was crucial in choosing the library system vendor (the bid went to ExLibris's ALEPH). Similarly, Anglo-American cataloguing rules (AACR2) have been introduced and, most recently, there is discussion of adopting the LC subject headings. Needless to say, the implementation was difficult and the fine tuning of the system is not over yet, though most if not all of the modules are up and running in all four libraries. The first on-line OPAC terminals were made available to readers during 1996. At present, these electronic catalogues reflect only the library's own collection--there are no links to the other libraries, let alone to a CASLIN Union Catalogue--though they do contain a variety of other databases (for example a periodicals distribution list is available on the National Library OPAC which lists the location of journals and periodicals in different libraries in Prague, including the years and numbers held). A record includes the call number--a point of no small significance--but does not indicate the loan status, nor does the system allow someone to 'Get' or 'Renew' a book.[11] In spite of this, the number of users of these terminals has grown sharply, especially among university students, and librarians are looking for ways to finance more (including some graphic ones with access to the WWW).

In the period between 1994 and 1996 several additional projects (conceived as extensions of the original CASLIN project) were presented to the Mellon Foundation for funding. It was agreed that the new partners would adopt the same cataloguing rules, as well as any other standards, and that they would (eventually) participate in the CASLIN Union Catalogue. The idea was to help assure that the original 'backbone' got some 'arms and legs' and would thereby have a more lasting impact on future library trends in both countries. Our vision was to come closer to a setup in which bibliographic as well as other types of information would be more easily accessible throughout the region and, considering the libraries' decreased purchasing powers, at lower costs. Each one of these projects also posed a unique challenge to the use of information technology as an integrator of disparate and incongruous institutional settings.

The Library Information Network of the Czech Academy of Science (LINCA) was projected as a two-tiered effort that would a) introduce library automation to the central library of the Czech Academy of Sciences and thereby b) set the stage for the building of an integrated library-information network that would connect the specialized libraries of all the 60 scientific institutes into a single web with the central library as their 'hub.' At the time of this writing, the central library's LAN has been completed and most of the hardware installed, including the high

capacity CD-ROM (UltraNet) server. The ideal of connecting all the institutes will be tested against reality this year, when the modular library system (BIBIS by Square Co., Holland) will be introduced together with workstations and/or mini-servers in the many locations in and outside the city of Prague. This is the first of the Mellon-funded CASLIN projects designed specifically with the idea in mind of integrating 'traditional' library functions with electronic text delivery, in particular, the availability of CD-ROM databases. Unlike the libraries in the original CASLIN project, all of which are defined as 'public' libraries (though their collections are large, historically valuable, and specialized), the libraries of the Academy of Sciences are meant to cater to the needs of primary research.[2]

The Kosice Library Information Network (KOLIN) is an attempt to draw together three different institutions (two universities and one research library) into a single library consortium. If successful, this consortium in eastern Slovakia would comprise the largest on-line university and research library group in that country. The challenge lies in the fact that the two different types of institutions come under two different government oversight ministries (of Education and of Culture) which further complicates the already strained budgetary and legislative setup. Furthermore, one of the universities--the University of Pavel Josef Safarik (UPJS)--at that time had two campuses (in two cities 40 km apart) and its libraries dispersed among 13 locations. UPJS is also the Slovak partner in the Slovak-Hungarian CD-ROM network (Mellon-funded HUSLONET) that shares in the usage and the costs of purchasing database licenses.[3]

Finally, the last of the CASLIN "add-ons" involves an attempt to bridge incompatibilities between two established library software systems by linking two university and two state scientific libraries in two cities (Brno and Olomouc) into a single "regional" network, *The Moravian Library Information Network* (MOLIN). The two universities--Masaryk University in Brno and Palacky University in Olomouc--have already completed their university-wide library network with TinLib (of UK) as their system of choice. Since TinLib records do not recognize the MARC structure (the CASLIN standard adopted by the two state scientific libraries) a "conversion engine" has been developed to guarantee full import and export of bibliographic records. Though it is too soon to know how well the solution will actually work, it is clear already that its usefulness goes beyond MOLIN, since TinLib has been installed in many Czech universities.[4]

In order for any of these projects to make sense other key document delivery functions would have to be taken care of. Fortunately, storage, document preservation, retrospective conversion and connectivity have all undergone substantial changes over the past few years. They are, however, worth a brief comment since they add important background information to the theme of this paper.

1. Access to holdings was limited by the poor condition of the physical plant and, in the case of special collections, the actual poor condition of the documents. The National Library in Prague was the most striking example of this situation; it was in a state of de facto paralysis when I first contacted the institution in 1990. Of its close to 4 million volumes only a small percentage was accessible. The rest were literally "out of reach" because they were either in milk crates and unshelved, or in poorly maintained depositories in different locations around the country.[5] This critical situation turned the corner in January, 1996, when the new book depository of the NL was officially opened in the Prague suburb of Hostivar. Designed by the Hillier Group (Princeton, N.J.) and built by a Czech contractor, it is meant to house 4.5 million volumes and contains a rare book preservation department (including chemical labs) and a large microfilm

department. As a result of cleaning, moving and reshelving over 2 million volumes by the end of 1996, it is now possible to receive the books ordered at the main building (a book shuttle guarantees overnight delivery).[6] Other library construction has been under way, or is planned, for other major scientific and university libraries in the Czech Republic.[7] But, of course, there is more to this proliferation of building projects. Objectively speaking, it is true that there was little if any attention paid to libraries (let alone to the pressing storage needs) during over half a century, so unless this matter was dealt with in a serious way, university and research libraries could not fulfill their tasks. On the other hand, there is also a significant component of symbolic value and political prestige involved. There is nothing unusual in this or in the tension it provokes or fuels. But most of the building plans incorporate the idea of computer automation and Internet access; they do not take into consideration what impact the possibility of a "virtual library" may have on their design and cost estimates. This is in spite of the progressively worse budgetary constraints, and in spite of the fact that information on this is readily available and many of the librarians had attended seminars on this topic. We will see this lack of vision repeated in other contexts.

2. The original CASLIN project included a small investment in microfilm preservation equipment, including a couple of high-end cameras (GRATEK) with specialized book cradles--one for each of the National Libraries--as well as developers, reader-printers and densitometers. The idea was to a) preserve the rare collection of 19th and 20th century periodicals (that are turning to dust), b) significantly increase the turnaround time that it takes to process a microfilm request (from several weeks to a few days), and c) make it technically possible to meet the highest international standards in microfilm preservation and consequently guarantee digital scanning and the conversion to other media in the future.[8]

3. The most technologically ambitious undertaking, and one that also has the most immediate and direct impact on document accessibility, is the project for the retrospective conversion of the general catalogue of the National Library in Prague. Known under the acronym RETROCON, it involves a laboratory-like setup of hardware and software (covered by a Mellon Foundation grant) that would--in a virtually assembly-line fashion--convert the card catalogue into Aleph-ready electronic form (UNIMARC). It is designed around the idea of using a sophisticated OCR in combination with a specially designed software that semi-automatically breaks down the converted ASCII record into logical segments and places them into the appropriate MARC field. This software, developed by a Czech company (COMDAT) in cooperation with the National Library, operates in a Windows environment and allows the librarian to focus on the "editing" of the converted record (using a mouse and keyboard, if necessary), instead of laboriously typing in the whole record. As an added benefit, the complete scanned catalogue has now been made available for limited searching (under author and title in a Windows environment), thereby replacing the original card catalogue.[9] Logically, the bibliography of 20th century Czech publications has been the top priority. It is the most used and its "automatic" conversion is thought to be the least problematic, since most of the records already exist in print and follow a standardized format (i.e., it is most amenable to an OCR to UNIMARC conversion algorithm). One of the most interesting aspects of this project has been the "out-sourcing" of the final step in the conversion to other libraries, a sort of division of labor (funded in part by the Ministry of Culture) that increases the pool of available 'expert' cataloguers. In exchange for the work, libraries get to keep the basic equipment and, as a side of effect of working with the COMDAT software, they also learn to catalogue in the UNIMARC record structure.[10]

4. For the most part, all installations of the LAN have proceeded with minimal problems and the library-automation projects, especially as these involve the technical services, are finally up and running. A quite different story can be told about the larger framework. While the Czech Intern group (CESNET) has been around for a while, its throughput had been very low (the first 10MB links were offered in January, 1997). This has had an adverse effect on library management, especially of the CASLIN consortium as a whole. The irony of the situation is made apparent by the fact that it is possible, and has been for several years, to log on to the catalog of the CASLIN libraries via Telnet on a home computer from abroad. The phone system in the Czech and Slovak republics has yet to undergo a serious overhaul (the first digital switchboards are now being installed) and even then, connecting to the Net from, for example, a Prague home, is very slow. Since all local calls are toll calls, it is only for members of the new entrepreneurial class, who can afford it, and for the growing number of computer addicts. Up until now, logging into the National Library from my friend's place across the street has been technically difficult and quite expensive.

III. *Cross-currents*

If one compares the present condition and the on-line readiness of research and university libraries in Central Europe with the *status quo*, as it arrived at the doorstep of the post 1989 era, then there can be no doubt that dramatic improvements have taken place. But if the once empty (if not broken) glass is now half filled, it also remains half empty. Certainly, that is how most of the participants tend to see the situation. Maybe because they are too close to it and because chronic dissatisfaction is a common attitude. Yet the fact remains that throughout the implementation and in all of the projects, obstacles appeared at just about every step of the way. While most of them were resolved, though not without some cost, all of them can be traced basically to three sources of friction: a) those best attributed to "external" constraints--the budgetary, legal, political and, for the most part, bureaucratic ties that directly affect a library's ability to function and implement change, b) those caused by "cultural misunderstandings"--the different habits, values and expectations that inform the activity of "localization," and c) the "internal" problems of the libraries themselves, no doubt the most important locus of micro-political frictions, and therefore of problems and delays. In what follows, I will focus on the first (with some attention paid to the second), since my emphasis here is on the changing relations *between* what are taken to be separate institutional domains (particularly between libraries and other government organizations or the market) as I try to make sense of the persistently problematic relationships between libraries (particularly within the CASLIN group). Obviously, while these analytical distinctions are heuristically valuable in reality these sources of friction are intertwined and further complicated by the fact that the two countries are undergoing a transition full of aftershocks and endless series of corrections. It is not only the libraries that are being transformed, so is the world of which they form a part.[111] To make sense of this double transition and to describe the multifaceted process that the library projects have moved through may pose some difficulties. But it also offers a unique opportunity to observe whether, and, if so, how, the friction points move over time. What could have been predicted when the initial project commenced--that "implementation" and "system localization" would also mean giving in to a variety of constraints--is only beginning to take on the hard contours of reality four years later. In several instances the results differ from *our* initial conception, but I don't think it would be fair to assume that the final outcome will be a compromise. Instead, the success of the Mellon library projects in Eastern Europe (of which CASLIN is only one) should be judged by the extent to which they have been accepted and have taken on a life of their own, initially distinguishable but finally inseparable from the library

traditions already in place. After all, if the projects were designed to affect a change in the library system, and by system we must understand a complex of organizational structures, a real culture, and an actually existing social network, then we must also expect that it will respond that way, as a complex socio-cultural system. What appeared at first as a series of stages (goals) that were to follow one another in logical progression and in a "reasonable" amount of time may still turn out to have been the right series. It's just that the progression will have followed another (cultural) logic, one in which other players--individuals and the organizational rules that they play by--must have their part. As a result, the time it actually takes to get things done seems "unreasonable," and some things even appear to have failed because they have not taken place *as* and *when* expected. What does this mean? A seemingly philosophical issue takes on a very real quality as we wonder, for example, about the future of the CASLIN consortium. If establishing a network of library consortia was one of the central aims of the Mellon project, then it is precisely this goal that we have failed to reach, at least now, when it was supposed to be long in place according to our scheme of things. There is no legal body and no formal association of participating libraries in place. This is particularly important and, needless to say, frustrating for those of us who take for granted the central role that networking and institutional cooperation play in education and scholarly research. But behind this frustration another one hides: it is probably impossible to say whether what is experienced as the status quo, which in this case is perceived as a failure or shortcoming, is not just another unexpected curve in a process that follows an uncharted trajectory.[12]

As I have noted above, in 1992 a "Letter of Intent" had been signed by the four founding CASLIN members. It was a principal condition of the project proposal. In January 1996, when this part of the project was--for all intents and purposes--brought to a close, there was still no formally established and registered CASLIN association with a statute, membership rules and a governing body in place. Although the four libraries had initially worked together to choose the HW and SW, the work groups that had been formed to decide on specific standards (such as cataloguing rules, language localization or the structure of the union catalogue record) had trouble cooperating and their members often lacked the authority to represent their institution. If things got done, it was due more to the enthusiasm of individuals and the friendly relations that developed among them than because of a planned, concerted effort on the part of the library leadership guided by a shared vision. If anything, there was a sense, at times, that the prestige of the project was more important than its execution or, more exactly, that while the funding for library automation was more than welcome, so was the political capital that came with being associated with this U.S.-funded project *even if this meant using the capital at a cost to the consortium*. As is well documented from many examples of outside assistance in economic development, well intentioned technology transfer is a prime target for subversion by other, local intentions; it can be transformed with ease into a pawn in another party's game. Potential rivalries and long standing animosities that existed among some of the libraries, instead of being bridged by the project, seemed to be exacerbated by it. In one instance, for example, affiliation with the Mellon project was used by a library to gain attention of high government officials (such as the cultural minister) responsible for policies affecting their funding and, most importantly, their mandate. The aim, as it now turns out, was to gain the status of a national library. The target, the library that already had this status, the Slovak National Library, was its primary CASLIN partner. While both libraries participated in the CASLIN project's implementation, and even cooperated in crucial ways at the technical level (as agreed), their future library cooperation was being undermined by a parallel, semi-clandestine, political plot. Needless to say, this has left the CASLIN partnership weakened and the library managements disfunctional.[13]

As the additional library projects, mentioned earlier, were funded and the new libraries joined the original CASLIN group, it became clear that the new, larger group existed more in rhetoric than in fact. From the newcomer's point of view there was not much "there" to join. "What was in this for us, and at what cost?" seemed to be the crucial question at the January 1996 meeting at which a written proposal for a CASLIN association was introduced by the National Library in Prague. This was not the first time that an initiative had been presented only to fail to take hold. Nor was it the last. The discussion about the proposal resulted in a squabble. An e-mail discussion group was established to continue the discussion, but nothing came of that either.

If the point of a consortium is for libraries to cooperate in order to benefit (individually) from the sharing of resources so as to provide better on-line service, then a situation such as this one must be considered counterproductive. A year later (January, 1997) a meeting was arranged for all the CASLIN members and other university and scientific libraries were once again invited to attend. This time no official proposal to establish an association was put forward and, instead, progress reports were given on specific aspects of library automation. Since these came from the National Libraries, which are mandated to develop and maintain (national) standards, they were of immediate interest to all the attending libraries. The detailed reports on the retrospective conversion project, and on the development of the CASLIN union catalogue record standard, made it clear that some cooperation was continuing at the practical level of technical services. But in the discussion that followed several library directors, many of whom were not CASLIN members (but who were clearly interested in such a possibility), expressed concern that, without more cooperation at all levels, it was going to become more difficult for individual libraries to participate in on-line consortia. Between budgetary problems, lack of expertise and unpredictable vendors (and their ever-changing products and standards) the smaller libraries, in the words of one of the librarians, "will be left out in the dark where they are liable to make costly mistakes that could have been avoided." This call for help presents a glimmer of hope, at least in the sense that "an expression of need," as one library director put it to me, "is what it will take for an association to form." Nothing came out of this meeting either.

How does one explain CASLIN's chronic inability to get off the ground as a real existing organization? The sense of apathy, reluctance, or even antagonism: where does it come from? For one, the fact that all the original CASLIN libraries come under the administrative oversight of the Ministry of Culture goes a long way in explaining the persistence of territorial behavior. The dramatic cuts in the ministries' overall budgets are passed down to the beneficiaries who find themselves competing for limited goods. If the difference from the previous setup (under the "planned" socialist economy) lies with the fact that the library has the status of a legal subject that designs and presents its own budget, its relationship to the Ministry--very tense and marked by victimization--seems more like the "same old thing." In other words, certain aspects of organizational behavior continue not only by force of habit (a not insignificant factor in itself), but also because these are reinforced by a continuing culture of co-dependency and increased pressure to compete over a single source of attention. As if, from our point of view, the formal command economy has been transformed into a market economy only to the extent that strategic and self-serving positioning is now more obvious and potentially more disruptive. So called "healthy competition" (so called by those whose voices dominate in the present government and who believe in the self-regulating spirit of "free market forces") seems to show only its ugly side; we see the Mellon project embraced with eagerness *in part* because of the way its prestige could be used to gain a competitive advantage over other libraries. In the case of CASLIN partners, we see it take the form of suspicion, envy and even badmouthing expressed directly to the Mellon grants administrator (myself).[14]

What the are the constraints under which a research or national library operates, and in what way is the present situation different from the "socialist" era [1948-1989]? An answer to these questions will give us a better sense of the circumstances under which attempts to bring these institutions up to international standards--and get them to actively cooperate--must unfold. Figures 1. and 2. illustrate *the external ties between a library and other important domains of society that affect its functioning and co-define its purpose* before and after 1989 (while keeping in mind that economic, legal and regulatory conditions have been in something of a flux in the years since 1989 and, therefore, that the rules under which a library operates continue to change).

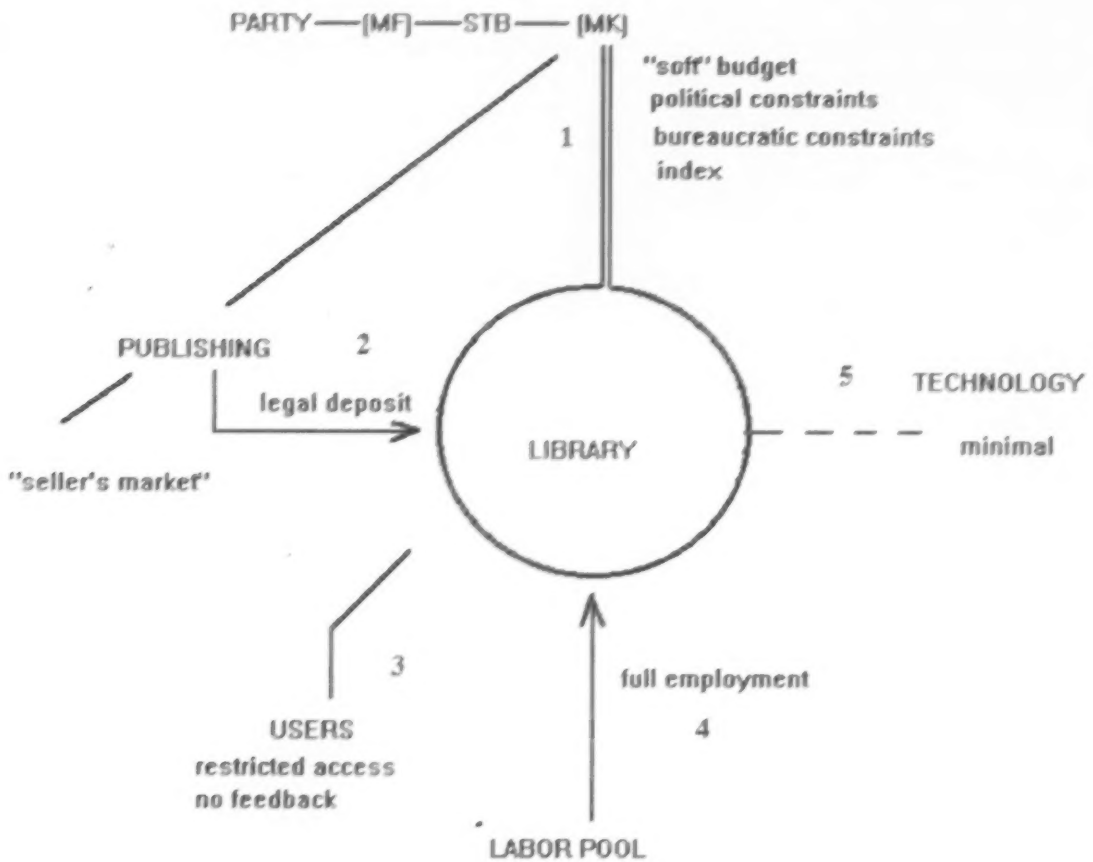

Figure 1: Czech research library *before* 1990; external ties

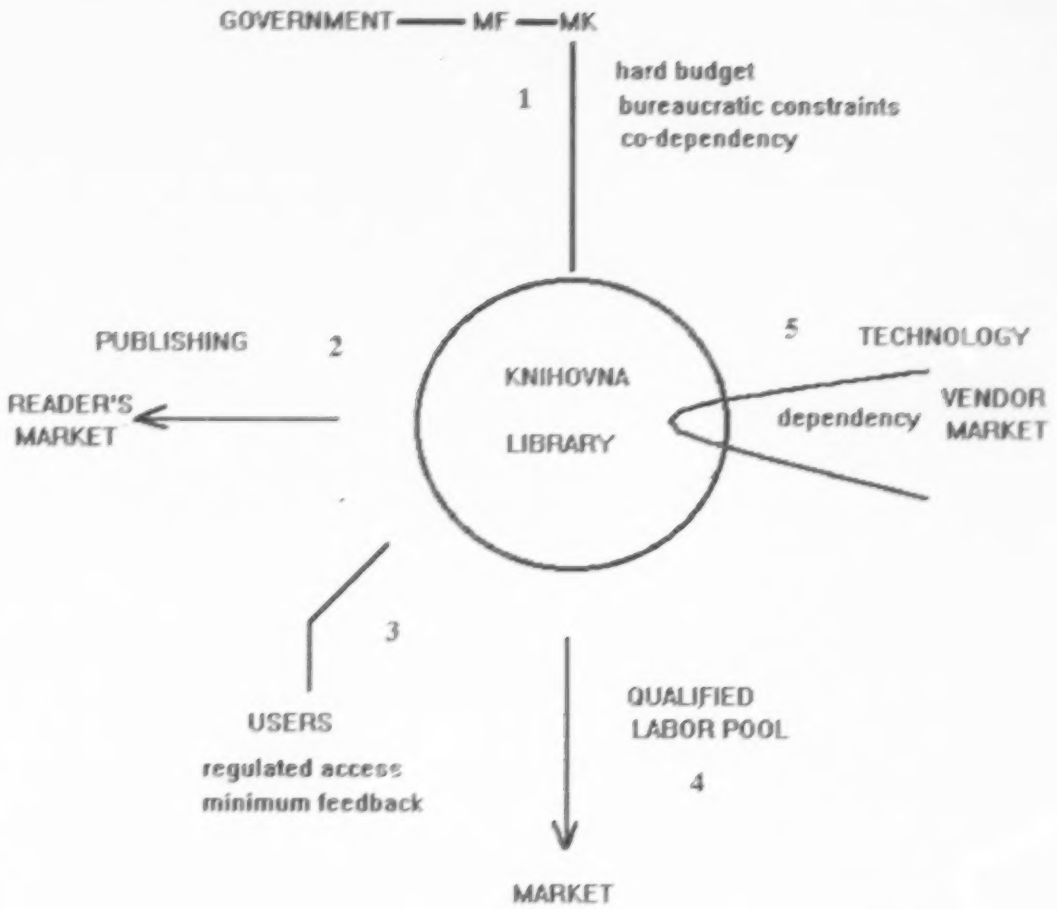

Figure 2: Czech research library *after* 1990; external ties

1. Under "party" rule, the library, like all other organizations, came under direct control of its ministry, in this case the Ministry of Culture [MK]. One could even say, by comparison with the present situation, that the library was an extension of the ministry. However, the ministry was itself an extension of the centralized political rule (the Communist party), including the watchful eye of the secret police [STB]. The director was appointed "from above" [PARTY] and the budget "arrived" from there as well. While requests for funding were entertained, it was hard to tell what would be funded and under what ideological disguise.[15] For the most part, the library was funded "just in order to keep it alive," though if the institution ran out of money in any fiscal year, more could be secured to "bail it out" (hence the expression "soft budget"). In addition to many bureaucratic constraints (regarding job descriptions and corresponding wage tables, building maintenance and repairs or the purchase of monographs and periodicals), *many of which remain in place*, there were political directives regarding "employability"[16] and, of course, the ever-changing and continuously growing list of prohibited materials to which access was to be denied (Index). In contrast, the library is now an "independent" legal body that can more or less decide on its priorities and is free to establish working relationships with other

(including foreign) organizations. The decision making, including organizational changes, now resides within the library. While the budget is presented to the ministry and is public knowledge, it is also a hard budget that is, in the end, set at the ministerial level as it matches its cultural policies against those of the Ministry of Finance [MF] (and therefore of the ruling government coalition). After an initial surge in funds (all marked for capital investment only), the annual budgets of the libraries have been cut consistently over the past 5 years (i.e., they are not even adjusted for inflation but each year are actually lower than the previous one). This has seriously affected the ability of the libraries to carry out their essential functions, let alone purchase documents or be in the position to hire qualified personnel.[17] For this reason, I prefer to speak of a relationship of "co-dependence." Since the Ministry of Culture still maintains direct control over the library's ability to actualize its "independence"--though it has gradually shifted from an attitude of outright harassment to one of more genuine interest--I remain skeptical that, should these ties be further weakened, if not cut, either of the institutions would know how to manage without the other. The point is, that where the Ministry of Culture is supposed to oversee the well-being of the institutions it oversees, it is, as is usually the case in situations of government supervision, perceived as the powerful enemy.

2. The publishing world was strictly regulated under the previous regime: all publishing houses were state enterprises (any other attempt at publishing was punishable by law) and all materials had to pass the scrutiny of the state (political) censor. Not everything that was published was necessarily "political trash" and editions were limited; the resulting economy of shortage created a high demand for printed material, particularly modern fiction, translations from foreign languages and the literary weekly (hence "sellers market"). Libraries benefited from this situation. Because all state scientific and research libraries were recipients of the legal deposit, their (domestic) acquisitions were, de facto, guaranteed. At present, the number of libraries covered by the deposit requirement has been reduced from some three dozen to half a dozen. This change was meant to ease the burden on publishers and give the libraries a freer hand in building their collection in a "competitive marketplace." But considering the severe cuts in the budget, many of the libraries cannot begin to fulfill even the most spartan acquisitions policy. For the same reason publishers, of whom there are many and all of whom are private and competing for the readers' attention, do not consider libraries as important parts of their market. Furthermore, many of the small and often short-lived houses do not bother to apply for the ISBN or to send at least one copy (the legal deposit law is impossible to enforce) to the National Library which, in turn, cannot fulfill its mandate of maintaining the national bibliographic record.

3. During the Communist era, access to materials was limited for several obvious reasons: political control (books on the "index," the limited number of books from Western countries, and theft) or deliberate neglect (the progressively deteriorating storage conditions eventually made it impossible to retrieve materials). Over the years, in effect, there was less and less correspondence between the card catalogues in the circulation room and the actual holdings. As a result, for example, students and scholars stopped using the National Library in Prague because it was increasingly unlikely that their requests would be filled. This was also true for recent Czech or Slovak publications because of an incredible backlog in cataloguing or because the books remained unshelved. Of course, in such a system there was no place for user feedback. Since then, some notable improvements, many of them due to Mellon and other initiatives, have been made in public services such as self-service photo-copying machines and, to remain with the example of the National Library, quick retrieval of those volumes that have been reshelved in the new depository. Also, readers are now used to searching the electronic OPACs or using the CD-ROM databases in the reference room. On the other hand, the backlog

of uncatalogued books is said to be worse than before and, with acquisitions cut back and the legal deposit not observed, the reader continues to leave the circulation desk empty handed. The paradoxical situation is not lost on the reader: if the books are out of print or, as is more often the case these days, their price beyond what they could afford, going to the library may not be a solution either. So far the basic library philosophy has remained the same as it has throughout its history: while there is concern for the user, libraries are not genuinely "user driven" (only a few university libraries have adopted an open stack policy) and, as far as I can tell, user feedback is not a key source of information, actively sought and used in setting priorities.

4. Under the policies of socialist economy, full employment was as much a characteristic of the library as it was for the rest of society. In effect, organizations "hoarded" labor (as they did everything else) with a sort of "just in case" philosophy in mind, since the point was to fulfill "the plan," at just about any cost, and provide full benefits for all, with little incentive for career development (other than through political advancement). Goods and services got to be known for their poor quality, the labor force for its extremely low productivity and its lousy work morale. More time seemed to be spent in learning how to "trick the system" than in working with it, to the point where micro-political intrigue--the backbone of the "second" economy--competed very well with the official chain of command. The introduction of a market economy after 1990 did very little to help change this in a library, a state organization with no prestige. Simply put, the novelty and promise of the private sector, coupled by its high employment rate and good wages, has literally cut the library out of the competitive market for qualified labor. Between the budget cuts and the wage tables still in place there is little space left for the new management to negotiate contracts that would attract and keep talented people in the library. Certainly not those with an interest in information technologies and data management.[18]

5. As mentioned above, the first information technologies arrived in the state scientific and national libraries in the late 1980s. Their impact on budgets was minimal (Unesco's ISIS is free ware), as was their effect on technical services. On the other hand, the introduction of information technologies into these libraries, in particular the CASLIN group, was the single most visible *and disruptive* change, a sort of wedge that split the library organizations open, that has occurred since 1990 (or, according to some, during the last century). The dust has not yet settled, but, in view of our present discussion, one thing is clear already: between the Mellon funds and the initial capital investment that followed, libraries have become a significant market for the local distributors of hardware and for the library software vendors (in contrast to the relationship with publishers). But, as everywhere else in the world of information technologies, these are not one-time purchases, but only the first investments into a new kind of dependency, a new "external" tie that the library must continue to support and at no small cost. And not just financial cost. The ongoing complications with the technology and the chronic delays in systems localization only contribute to the present sluggish state of affairs, and thus lend support to the ever cynical factions within the organization that knew "all along" that "the whole automation project was a mistake." Obviously, the inability to attract qualified professionals doesn't help.

What I have painted here is but part of the picture (a detailed analysis of the micropolitics that actually go on, both inside the organization and in relation to other organizations, particularly other libraries, would make up the other part). But the above discussion should help us see how and why the libraries feel trapped in a vicious circle from which they perceive little or no way out, other than continuing to battle for their place in the sun. Of course, their tactics and battle cries only reinforce the relationship of codependency, as well as their internal organizational problems. And, "from the outside," that is exactly what the public and government officials see:

that these are institutions that need to "grow up" and learn what "real work" is before "more money is poured down the drain." Needless to say, I don't think there is any doubt that a government that has made a conscious choice against long term investment into the educational, scientific and information sectors must carry a sizable portion of the blame.

If the long-standing administrative ties between libraries and the Ministry of Culture inform and override the building of new, potentially powerful ties to other libraries, then the flip side of this codependency, its result, is *a lack of experience with building, and envisioning the practical outcome of a horizontally integrated (i.e., non-hierarchical) association of independent organizations.* The libraries had had only limited exposure to automation, and the importance of long-term strategic planning was lost on some of them.[19] At least two other factors further reinforced this situation: the slow progress (the notorious delays mentioned above) in the implementation of the new system, which had involved what seemed like impractical and costly steps (such as working in UNIMARC), and the sluggish Internet connection. This suggests that *at the present, a traditional understanding of basic library needs (which themselves are overwhelming) tends to take precedent over scenarios that appear much too radical and as not grounded in a familiar reality. Since the on-line potential is not fully actualized, its impact is hard to imagine and so the running of the organization in related areas continues to be predominantly reactive rather than proactive. In other words, "in house" needs are not related to network solutions.* Especially when such solutions appear to be counter intuitive for the established (and more competitive) relationship between the libraries!

Cooperation among the libraries existed at the level of system librarians and other technical experts. Without this cooperation the system would not have been installed, and certainly not as an identical system in all four libraries. In addition (and, I should say, ironically), the CASLIN project has now received enough publicity to make it a household name among librarians. The acronym has a life of its own, and there is a growing interest among other scientific libraries to join this "prestigious" group (that both does and does not exist).[20] The meetings described above were witness to the moment at which the confluence of *de facto* advances in technical services and a growing interest of other libraries in logistical support (involving technology and technical services) created a palpable *need* for a social organization that would exist a) above and beyond the informal network of cooperation and b) without association with the name and funds of the Andrew W. Mellon Foundation (its original reason for existence). I have heard it said, on the other hand, that "nothing more is needed," since the fundamentals of CASLIN are now embedded in the library process itself (reference here, I gather, was to cataloguing), and in the existing agreements between individual libraries on the importing and exporting of records into and from the CASLIN Union Catalogue which is serviced by the two National libraries. In fact, as the most recent meeting (June 1997) of the Union Catalogue group made clear, this is indeed where the seed of an association of CASLIN libraries lies. The import and export of records and the beginning of the UC database have yet to materialize, but that was what brought these individuals who represented individual libraries together. If only they had the experience and the wherewithal to run their own show and stick to it. But if they do, then there is fair chance that an organization of CASLIN libraries will take off.

IV. Concluding remarks

The above discussion raises three very important points for me as I begin to gather my thoughts on the Mellon CASLIN projects. *First*, regarding *cultural misunderstanding*, the problem with the "misbehaving consortium" may lie to a large extent with our (e.g., U.S.) expectations of

what cooperation looks like and what basic fundamentals an on-line library consortium must embrace in order to do its job well. In the Czech and Slovak case, not only were the conditions not in place, they were counter-indicative. While our naivité caused no harm (the opposite is the case, I am repeatedly told!), it remains to be seen what the final result will look like. And that is where the really intriguing lesson resides: maybe it is not so much that we should have or even could have thought differently, and therefore ended up doing "that" rather than "this." Perhaps it is in the (information) technology itself--in its very architecture--that the source of our (mis)understanding lies. After all, these technologies were developed in one place and not another. Our library automation systems obviously embody a particular understanding of technical and public services and an organization of work that share the same culture as a whole tradition of other technologies that emphasized speed, volume (just think of the history of railroads or the development of the "American system" of manufacturing) and, finally, access. Every single paper in this conference volume exemplifies and assumes this world. In transferring a technology from one place to another, an implied set of attitudes and habits is being marketed as well. To this possibility my *second* point lends some support: technology transfer involves a time lag, the duration of which is impossible to predict and that is accounted for by a complex series of micro-political adjustments. It is this human factor that transforms the logical progression in the *projected* implementation process into a much less logical but essentially social act. Thanks to this, the whole effort may fail. Without it, the effort cannot exist. Only after certain problems and not others arise will certain solutions and not others seem logical. And since the technology comes from "elsewhere," are not the problems it provokes in a new setting, and the solutions that seem logical to us, just a bit more complicated than we would have liked to believe? It is no secret that much social change is technology driven (hence our conference). It is less clear, ethnographically speaking, what exactly this means, and even less is known about this process when technology travels across cultural boundaries. There is much to be gained from looking carefully at the different points in the difficult process of implementing projects such as CASLIN. Apparently the ripple effect reaches far deeper (inside the institutions) and far wider (the government, the market and the users) than any one would have anticipated. Before it is even delivering fully on its promise, the original Mellon project is demanding changes in library organization and management. Such changes are disruptive, even counterproductive, long before they "settle in." Nevertheless, it is also, and this is my *third* point, eliciting changes in the relations with the "outside." At least on the Czech side--it is important to emphasize that the situation in the two countries has continued to diverge--the Ministry of Culture has taken a keen interest in supporting library automation. On the Slovak side, unfortunately, the Ministry of Culture has played the mostly negative role of paying lip service to, or even actively undercutting, library initiatives. And this is only one of many positions taken by the Slovak government (and even written into law) that are deliberately aimed at controlling intellectual activity (splitting up universities is another).

What, then, is the discernible impact of the technological changes discussed above on the library user and, more specifically, on scholarly communication? In addition to the improvements in public services already mentioned, some of the newer CASLIN library members, such as university libraries and the central library of the Czech Academy of Sciences, are now offering document delivery services in addition to electronic databases on their LAN. These services, based on actual subscriptions (licenses), are continuously threatened, however, by library cuts. Take, for example, the situation at one central university library which has no funds to subscribe to new CD-ROM databases. Because it operates the UltraNet server, it will (depending on the license) provide restricted or wide area LAN service for schools that have been able to secure a CD-ROM license thanks to their own, usually foreign, grants. Since it is mostly the natural sciences and medical schools that have independently funded projects, their use of current

on-line journals and databases is, ironically, better covered than the more "traditional" needs of the humanities and social sciences for whom there are no funds to speak of (the equivalent of a few thousand dollars per year for the acquisition of monographs).

Obviously, an evaluation of technology and scholarly communication in Eastern Europe cannot be limited to a discussion of the possible impact that the shift to on-line library consortia may have. As radical as this change is and certainly will continue to be, it is only the first step. Unless we know as much about the other aspects, about past and present trends in the organization and practice of science and higher education, we cannot do this topic full justice. Once again, there are many ways in which the scholarly tradition differs quite sharply from ours. The distinction between universities and scientific institutes (different budgets, different responsibilities), the non-existence of academic tenure, the 100% dependence on state funding, the planning and defining of politically correct research agendas, as well as the political economy of the publishing world, are just some of the features that defined the culture of research and education for 45 years. And only some of these parameters have changed (gradually) since 1990. The significance of these changes is still unclear and a matter of debate. While experimental scientists are long accustomed to the use of the citation index or, for example, chemical abstracts (they may even find their own work cited), the social sciences and especially the humanities operate in a less international context, and are used to their own tradition of accessing, quoting, referencing and even writing. It is difficult to say whether this will or should change, or how this portion of the intelligentsia will take to the new possibilities or, conversely, what sort of demands it will make on library services, and what sort of pressure the availability of new forms of publishing, funding or teaching will put on them. One thing we can say with confidence: unless there is a change in government policy towards a more consistent support, both financial and legislative, for education and research, these changes will appear slowly and take on many backhanded twists and turns.

At the beginning of this paper I argued that in discussing the introduction of new technologies, specifically information technologies, it is important to pay attention to the point of transition, to see all that is involved in this change of habit and why it is not just a "matter of time." The body of this paper, I hope, provided at least a glimpse of some of the friction points involved. For the time being, the last word, like the first, belongs to an economist, in this case to Vaclav Klaus, the prime minister of the Czech Republic, whose opinions expressed in a recent op-ed piece on "Science and our Economic Future," make him sound like a someone who has just bitten into a blue tomato only to find that it tastes like a peach.

> ...science is not about information, but about knowing, about thinking, about the ability to generalize thoughts, make models of them and then testable hypotheses that are to be tested. Science is not about the Internet and certainly not about its compulsory introduction. (Klaus, 1997)

NOTES:

1. These and other features--such as WWW access to the catalogue--should be available shortly. As for the size of the database, of the total collection only a fragment is presently on-line. Prior

to the introduction of the new system, libraries had been cataloguing in ISIS. These records have been converted with little or no loss to the UNIMARC format which meant--in the case of the National Library--that, from the outset, several hundred thousand records were Aleph-ready. New acquisitions are catalogued directly into the new system and more records are made available through retrospective conversion (see below).

2. For additional details on the this project, see the LINCA proposal presented to the Mellon foundation (LINCA, 1994).

3. In fact, as of January 1997, the two campuses of UPJS have been redefined as two universities. The move was political (divide and conquer), playing off existing institutional rivalry. What the consequence of this will be on the project is not yet clear. The details of the original project can be found in the KOLIN proposal to the Mellon Foundation (KOLIN, 1995).

4. For a more detailed account of the compatibility and conversion problem as well as of the solution, see Appendix H. of the MOLIN proposal (MOLIN, 1996). TinLib is the most widely used library system among Czech universities (the Czech vendor is located at Charles University in Prague).

5. More precisely, out of the approximately 1.5 million volumes deposited in the central library (the Klementinum) about 1/5 were unshelved. Because these were new acquisitions--most in demand by users--most requests went unfulfilled.

6. Hence also the symbolic significance of including the call number on the electronic record - it actually corresponds to a retrievable object! What a treat!

7. There is no comparable library reconstruction going on in Slovakia, and it is not clear whether any of the authorized building projects in the Czech Republic will actually be funded, considering the most recent austerity measures introduced by the conservative government in the Spring of 1997.

8. Equally important in the area of rare book and manuscript preservation is the direct digitalization project at the National Library in Prague, in which early medieval illuminated manuscripts are being scanned and made available on CD-ROM (in 1995/96: *Antiphonarium Sedlecense* and *Chronicon Concilii Constantiniensis*). This is a UNESCO sponsored *Memory of the World* project.

9. The plan is to preserve the card catalogues in the library's archive and make use of the several rooms that they presently occupy as reading rooms.

10. There is much more to this fascinating and complex project, well worth a separate study. The interested reader may wish to look at the original text of the project as it was presented to the Mellon Foundation for Funding (RETROCON, 1994), and at a special publication of the National Library devoted to this topic (Bares and Stoklasova, 1995).

11. For the theoretically minded reader: I have put some of the terms in this paragraph in quotes on purpose, in order to highlight their own ambiguity in the anthropological scheme of things. The expression *cultural misunderstanding* is taken from a study with the same title and on that

very topic (Raymonde Carroll, 1987). I use *culture* as a cover term for what would be better served by the more obscure terms *habitus* or *discursive practice*. Most importantly, the use of the term is not meant to imply ethnic or national specificity or some bounded system of traditions. I borrowed the term *localization*, used to describe the adjustment that a library system software undergoes for a particular language, as a suitable characterization of the overall process in which one library tradition is made to fit a new (one could even say foreign) setting. Finally, *external ties* are often found embedded inside the organization. I wish to exercise caution in using this term since it is often quite difficult to pinpoint where an organization ends and the external world begins.

12. The role of time management and, in particular, of delays in the implementation of the library project is a topic of a separate study (Lass, n.d.).

13. According to a recent document (issued by the Slovak Ministry of Culture), the library's new mandate would include, among other things, the issuing of ISBN and the development of the national bibliographic records. This has put them in the situation, apparently desired, of having to demand the transfer of positions, computer hardware (mostly CASLIN Mellon purchases), and existing databases from the Slovak National Library--it remains unclear how they would gain the expertise--without which they cannot do the job. While there are other examples in which institutional rivalries have adversely affected the CASLIN project, in only some of them does the rivalry reside with the libraries themselves. In several instances it is the libraries that are caught in the middle of a battle. Such is the case in the KOLIN project discussed above (see also footnote 3.).

14. The symbolic significance of foreign (Western) funds is not to be underestimated, nor should the role that this phenomenon has on the actual implementation of the project (covered best by the anthropological studies of 'cargo cults' or witchcraft). As for the politics of institutional positioning, the situation under review was made transparent (and more complicated) by the break-up of Czechoslovakia and, following that, by the surfacing of other regional tensions. As a result, the relationship across the border is more amicable (there is nothing to compete over), while the relationship between the two libraries in each of the countries is much less so.

15. One of the surprises was the funding of automation at the National (then University or State) Library during the 1980's in Prague, which resulted in the development of a local machine-readable record format (MAKS) that became the accepted system among a majority of Czech and Slovak libraries. The grounds for "technology transfer" were therefore prepared (contrary to some who maintained that there was no expertise in place) when automation arrived in earnest after 1990.

16. Ironically, the library became one of the "safe places" to "hide" politically discredited intellectuals (from the post 1968 purges).

17. If the purchase of foreign (especially Western) books and periodicals was restricted for mostly political reasons, it is now actually stopped altogether due to zero (!) funding.

18. As a result, organizational behavior retains its characteristic sluggishness. It is reasonable to predict that as the constraints on the budget continue to increase, so will the familiar ability to "trick the system." Under these conditions, teaching new management skills has been close to impossible and introducing a new record structure and cataloguing rules very slow. This

accounts, to a large extent, for the continued backlog of uncatalogued books.

19. The fact that 'planning' is a discredited term doesn't help. And trying to explain that socialist planning and strategic planning may be quite different things doesn't seem to work.

20. On the Czech side, the Ministry of Culture has decided to support library automation projects throughout the country, in the form of capital investment grants (no funds for salaries), that meet CASLIN standards.

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